

CLAIMS:

1. A rewritable optical data storage medium for high-speed recording by means of a focused radiation beam, said medium comprising a substrate carrying a stack of layers, which stack comprises, a first auxiliary layer, a second auxiliary layer, and a recording layer of a phase-change material mainly comprising an alloy of Sb and at least one of Ga and In, which recording layer is interposed between the first auxiliary layer and the second auxiliary layer, characterized in that the alloy is of a composition in atomic percentages defined by the formula:



2. An optical data storage medium as claimed in Claim 1, wherein the alloy is of a composition in atomic percentages defined by the formula:



3. An optical data storage medium as claimed in Claim 1, wherein the alloy is of a composition defined by the formula: $\text{Sb}_z\text{M}_{(100-z)}$ and M selected from the group of Ga and In and $70 \leq z \leq 95$.

4. An optical data storage medium as claimed in Claim 3, wherein $77 \leq z \leq 91$.

5. An optical data storage medium as claimed in Claim 1, wherein the recording layer additionally contains up to 10 at.% of Ge.

6. An optical data storage medium as claimed in Claim 1, wherein a reflective layer is present adjacent the second auxiliary layer at a side remote from the first auxiliary layer.

7. An optical data storage medium as claimed in Claim 6, wherein an additional layer is present sandwiched between the reflective layer and the second auxiliary layer

screening the reflective layer from a chemical influence of the second auxiliary layer.

8. An optical data storage medium as claimed in Claim 7, wherein the additional layer comprises Si_3N_4 .

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9. An optical data storage medium as claimed in Claim 1, wherein the recording layer has a thickness smaller than 20 nm.

10. Use of an optical data storage medium according to any one of the preceding

10 Claims for high data rate recording with a recording speed of at least 10 m/s and an archival life stability of at least 10 years at 30°C.